



# **amateur radio**

Vol. 34, No. 12  
**DECEMBER**  
1966

Registered at G.P.O., Melbourne, for  
transmission by post as a periodical

**25c**



# "AMATEUR RADIO"

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA FOUNDED 1910

DECEMBER 1966

Vol. 34, No. 12

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Parade, East Melbourne, C.2, Victoria. Hours  
10 a.m. to 3 p.m. only.

## Publishers:

VICTORIAN DIVISION W.I.A.,  
Reg. Office: 478 Victoria Pde., East Mel-  
bourne, C.2, Victoria.

## Printers:

"RICHMOND CHRONICLE," Phone 42-2419.  
Shakespeare St., Richmond, E.1, Vic.

★

All matters pertaining to "A.R." other  
than subscriptions, should be addressed to:

## THE EDITOR,

"AMATEUR RADIO,"

P.O. BOX 36,  
EAST MELBOURNE, C.2, VIC.

Acknowledgments will be sent following  
the Committee meeting on the second Mon-  
day of each month. All Sub-Editors should  
forward their articles to reach "A.R."  
before the 5th of each month. Any item  
received after the Committee meeting will  
be held over until the next month. Pub-  
lication of any item is dependent upon space  
availability, but in general about two  
months may elapse before a technical  
article is published after consideration by  
the Publications Committee.

★

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Direct subscription rate is \$3.00 a year, post  
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## FEDERAL COMMENT

★

## A.O.C.P. EXAMINATIONS

The following letter is of importance to all prospective Amateurs and  
S.w.I's. Please note for the future.

Federal Secretary, W.I.A.,

Dear Sir,

As you are aware, following the discussions which took place  
on the revision of the Amateur Handbook, it was decided to reduce  
the frequency of examinations for Amateur Operators' Certificates  
from four to two a year, to be held on the third Tuesday in Feb-  
ruary and August, with supplementary examinations on the third  
Tuesday in May and November in Section L (Telegraphy).

In the light of developments which have occurred since the  
discussions it has now been decided to introduce the new examina-  
tion arrangements as from August, 1967. Quarterly examinations  
will be held in January and April, 1967, as usual but not in July,  
1967. The first supplementary examination in the subject of tele-  
graphy will be held in November, 1967.

The selection of August, 1967, for the introduction of the  
proposed new arrangements was influenced largely by the period  
which was considered necessary for adequate notice to be given to  
all interested parties. It is expected that this date should provide  
sufficient time also for the Wireless Telegraphy Regulations to be  
amended as required and for the new Handbook to be printed  
and made available so that the paper on the subject of Regulations  
for the first examination to be held under the new arrangements  
may be based on the revised rules.

It would be appreciated if you would be good enough to  
arrange for the matter to be publicised through the normal  
channels of the Institute, please.

Yours faithfully,

C. M. Carroll,

for Director-General.

Federal Council and the Executive of the Wireless Institute of  
Australia wish all members the Compliments of the Season and bright  
prospects for 1967.

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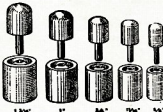
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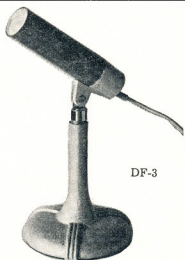
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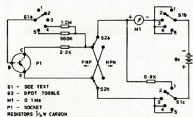


# A SIMPLE TRANSISTOR TESTER

ROY PROWSE,\* VK3XY

The transistor field has made great strides in the last several years and their use has become widespread. The practical application of these devices is increasing in the Ham shack, as is evidenced by the number of Hams who are using transistorised equipment both commercially manufactured and home-built.

The author has been experimenting with various transistor applications for the last few years and were it not for the fact that the junk box—a product of some 30 years' Hamming—holds many tubes and tube circuitry components, transistorised equipment would be used exclusively. However, the pocket-book dictates that the junk box be used wherever possible. When this is not possible then transistors are used and in this regard the cost is much less when compared with tubes and their circuit components. Also, metalwork requirements are considerably less.



SIMPLE TRANSISTOR TESTER

This experimentation has revealed that the spread of characteristics between transistors of the same type is sometimes quite large, and it quickly became apparent that to achieve the best results only the best of the type to be used should be procured. Also, a method was required for confirming the continuing serviceability of these devices, both PNP and NPN, which had been used again and again in various experimental circuits.

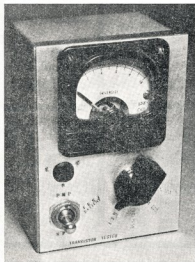
The answer, of course, is a transistor tester, but have you seen the price? Therefore, a tester was required which would provide the answers the author wanted at little cost and the box described is the simplest method the author could find of achieving this requirement, and the instrument has proved invaluable. Readers may be interested in the box which can be built from scratch for a few dollars, the only item which could be considered as expensive being the meter. The box will, of course, not read all required parameters but for a simple "go no-go" device it has been found to be all that is required.

Incidentally, use of the box in a dealer's premises has produced many looks of amazement but the desired result has been achieved in that some transistors for which the dealer wanted good money were not acceptable to

the author. Only the best of the particular type wanted were taken and it can only be presumed that those that were not acceptable were sold to other experimenters and placed into use with not always the desired results being achieved.

The circuit and physical make-up of the tester is shown in the accompanying diagram and photograph. The box used is the familiar BC1366 from disposal sources and which was referred to in a previous article by the author. All components in the box are removed and the only item which is re-used is the switch which is re-located, and re-wired as shown. The other items used are shown in the parts list.

Study of the circuit diagram will show that S2 selects the correct applied voltage polarity for either PNP or NPN type transistors, and that S1 has five positions. For those who do not know the BC1366, position No. 1 of this switch is a spring-loaded position from No. 2 position, and the switch must be physically held in No. 1 position to register. This position is used to test the battery voltage by placing the 6.8K resistor in series with the meter and the battery. It is not essential of course that this type switch be used—any 3-pole, 5-position switch will do.



Position No. 2, as shown, is the OFF position. Position No. 3 tests emitter-collector leakage (with the base floating), and it has been surprising to find how high this can be in many allegedly high quality transistors. However, due regard must be given, of course, to the effect that a rise in temperature can have on this parameter. Positions Nos. 4 and 5 read the common-emitter forward d.c. current-transfer ratio (beta or  $H_{FE}$ ), which of

course will also be subject to temperature effects, particularly with germanium types.

Positions Nos. 4 and 5 read respectively up to a maximum  $H_{FE}$  of 200 and 100. For example, on the X200 range position a reading of 0.4 mA. equals a d.c. beta of 80.

If this article stimulates your interest in transistors, then one of the aims of the author has been achieved. There are many bargains available in the transistor field and this tester will allow you to make a reliable selection of the good from the not so good, and more important still, to reject the bad, of which there are many about. A little experimenting with these devices and, like the author, you will say goodbye to tubes, pocket-book permitting. The safety factor alone warrants their use—think of the low operating voltages involved. No need to keep one hand in the pocket in the time-honoured way, which is not always successful.

★

## Technical Correspondence—

### "THE MODE OF POWER"

Editor "A.R.," Dear Sir,

On page 3 of the October issue of "A.R." appears an article on a 240v. a.c. power supply by B. A. White, VK5YB.

In the last paragraph he credits me with "the mode of power".

It would be pleased if, in a subsequent issue, you would correct this statement. It is true that Barry VK5YB saw the power plant which I made up and have been operating successfully for very many years. However, I myself gained the information from an article published in the June 1956 issue of the American publication "CQ" and which was loaned to me by Wally Green, VK6WG.

The article in "CQ" also contained additional information and circuits of alternative methods of excitation which might be of interest to other readers. Unfortunately I have no complete copy of the article. However, knowing that there is another published article could be of some assistance to those who desire to go further into the matter.

I would add that the control box containing the condensers and switching can be located at the load or operator's end of circuit. This is a decided advantage since the power unit can be placed at a distance from the operator, so reducing the exhaust noise of the prime mover. The scheme's biggest advantage appears to be that, apart from the ignition noise from the spark plug (and which is as easily suppressed), it is electrically noise free.

—Rolo Everingham, VK6BO.

## AMATEUR FREQUENCIES:

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## Transceiver Power Supplies

Editor "A.R." Dear Sir,

The comments of Phil VK5NN and Lee VK7RG in "A.R." for July and September are very much to the point.

Many Amateurs long to own a piece of American-made equipment and will refuse to buy a locally made product. In some cases this is justified because the Australian maker may have failed to supply a reliable product, however, this aversion to the local product is often unjustified and many local manufacturers have demonstrated their ability to design and construct high quality equipment.

We must not lose sight of the fact that there are, in fact, three markets in Australia. Firstly, there is the "consumer product" market—Radio, T.V. etc. Then follows the "professional or capital equipment" market—this requires an entirely different design approach to cater for the much higher reliability required by people who depend upon these devices to provide saleable services. Professional engineers usually make the purchasing decisions and equipment is installed and maintained by qualified engineers and technicians. The third is the "military market." Here the demand is for very reliable equipment capable of operation under the most arduous conditions.

As the demands made upon the equipment increase, so the cost rises. It may also rise because the quantity required is quite small.

Australian Amateurs, as a class, have become used to using equipment made mostly for the military market demand somewhere between the consumer product and the professional equipment market. Equipment must be inexpensive and reasonably reliable, but, no service of vital importance will fail if the equipment does not work and so the "over-running" of certain components such as final tubes is justified.

Many years in the electronic field leads me to believe that at least one area where the Australian product is definitely superior is power supplies. The main reason for this is that supplies made in Australian factories are designed for operation from 240 or 250 volts c.p.s. a.c. and not 110/220 or even 117/234. American supplies are usually designed for 117v. 60 c.p.s. and will in many instances run hot on 50 c.p.s.

My criticism in the case of transceiver supplies is not that they run hot, but that they supply voltages which are considerably in excess of the absolute maxima listed by the tube makers in equipment where the tubes are already being run beyond their normal limits. The National NCX-A power supply is rated to supply 700v. d.c. at 300 mA., 280v. d.c. at 200 mA., plus bias and filament voltages. It performs satisfactorily without overheating and will handle an a.c. input of plus or minus 10% without distress. The dynamic regulation is quoted as 2%. But what of the equipment voltages under these conditions of high line voltage?

To me the frightening thing about these measurements is that the voltages exceed the tube manufacturers' ratings long before the equipment makers' tolerances are exceeded. Even under conditions of maximum voltage the power supply continued to run "cool" after a considerable period of operation.

A number of Amateurs using equipment of similar type, but not necessarily of the same make, have reported that the final tubes became gassy after a short period of operation. When one considers that many of the tubes used by U.S. manufacturers in their s.s.b. equipment are not readily obtainable in Australia and may cost up to about \$8 or \$10 per pair (with tax), it can be seen that the problem is a serious one. The following are among the comments for a type of operation which will permit the final tubes to give of their best for longer periods. Remember that if your final voltage is 800v, and

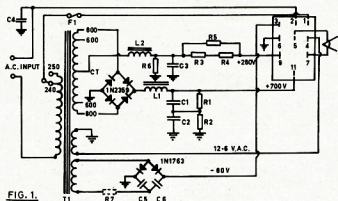


FIG. 1.

- C1, C2—80 $\mu$ F. 450v. wkg.  
C3—80 $\mu$ F. 450v. wkg.  
C4—0.01 $\mu$ F. 600v. D.C.W.  
C5, C6—20  $\mu$ F. 150v.  
R1, R2—4  $\times$  7.5 k ohms 10w. w.w. in series.  
\*R3, \*R4—330 ohms 10w. w.w.  
R5—660 ohms 10w. w.w.

- R6—30k ohms 10w.  
\*R7—Value to be decided on test (50-500 ohms.  
T1—800/600v. c.t. 300 mA., 35v. 10 mA. (doubler), 12.5v. a.c.  
L1—12/2 Hy., 25/300 mA., 60 ohms d.c. Res.  
L2—2H. 200 mA. 44 ohms d.c. Res.

Table 1 lists the readings I have obtained. (Voltmeter AVO Model 8, checked at better than 1% on all ranges.) From these figures it can be seen that the static regulation between an e.h.t. load of 50 mA. (s.s.b. idling) and full plate current of 300 mA. is 720  $\times$  100, equals 10.7% (approx.) on the 234v. input figures. This is very good indeed under static conditions and is due very largely to the low resistance of the transformer and chokes. With an e.h.t. filter capacitance of 40  $\mu$ F. one could expect that the claimed dynamic regulation figure of 2% will be achieved.

they idle at 50 mA. (2 x 6JB6's or similar), the plate dissipation is 40 watts.

Because of this feature of the use of American supplies, it has been decided to design Australian-made supplies which will meet the requirements of such transceivers and permit operation at the full rated 200w. (p.e.p.) input or a lower figure of about 120 watts, by simply changing secondary taps.

Australian Amateurs can purchase basic kits consisting of a transformer and two chokes for a modest sum and complete power supplies are available at prices which are about half that of an imported supply. The transformers are provided with primary taps at 240 and 250 volts to cater for the line conditions usually encountered in Australia.

S. T. Clark. VK3ASC.

| a.c. input voltage   | 700 volt line |        |         | 280 volt a.c. line |      |     | Bias | Heater a.c. | a.c. Tol. |
|--|---------------|--------|---------|--------------------|------|-----|------|-------------|-----------|
|  | no load       | 50 ma. | 300 ma. | idling             | full | o/p |      |             |           |
| 258  | 900           | 790    | 750     | 310                | 300  | ... | -82  | 13.7        | plus 10%  |
| 250  | 870           | 780    | 720     | 300                | 290  | ... | -80  | 13.3        | plus 6%   |
| 234  | 820           | 720    | 680     | 282                | 272  | ... | -75  | 12.5        | Nominal   |
| 220  | 770           | 675    | 640     | 270                | 260  | ... | -70  | 11.8        | minus 6%  |
| 210  | 735           | 645    | 610     | 255                | 245  | ... | -67  | 11.2        | minus 10% |
| When the heater voltage was adjusted to read 12.6v. other readings as follows: |               |        |         |                    |      |     |      |             |           |
| 236  | 830           | 730    | 690     | 285                | 275  | ... | -76  | 12.6        |           |

Then the heater voltage was adjusted to read 12.6v. other readings as follows:

Table 1.

AMATEUR FREQUENCIES:

ONLY THE STRONG GO ON—  
SO SHOULD A LOT MORE  
AMATEURS!

# SINGLE SIDEBAND-POWER MEASUREMENTS

Following the discussions carried on over the past year with the Postmaster-General's Department on the subject of single sideband power levels and methods of measurement, Federal Executive of the W.I.A. have received the following letter from the Department. It sets out quite clearly the allowable power and acceptable method of measurement, both of which are fully endorsed by the Institute.

The concept of listing acceptable commercial equipment is an extremely practical one and should be of assistance to all concerned. This first list does not presume to be exhaustive and suggestions from all Amateurs for additions to it would be welcomed.

Such suggestions should be sent to the Federal Secretary, W.I.A. (P.O. Box 2611W, Melbourne, Victoria), and not to the Department. Inclusion of photostat copies of the maker's specifications and recommended operating conditions will be of great assistance in negotiating approval.

Additions to the list of approved equipment will appear in "A.R." as and when such approval is obtained.

—H. L. Hepburn,  
Federal Vice-President,  
W.I.A.

Federal Secretary, W.I.A.,  
Dear Sir,

As discussed previously in connection with the use of single sideband equipment, forwarded herewith is a list of equipment types which the Department is prepared to accept as meeting the 400 watt. p.e.p. power output limitation when operated in accordance with the maker's specification.

**B. & W.:**  
6100

**Central Electronics:**  
\*200V  
\*10A  
\*600L

**Collins Radio:**  
\*32S1  
\*32S3  
\*KWM1  
\*KWM2

**R. L. Drake and Co.:**  
\*TR4  
\*TX4  
\*TR3

**Dynalab Co.:**  
HW12  
HW22  
HW32

**E.I. Co.:**  
757  
\*753

**Hallcrafters:**  
HT46  
SR150  
SR160  
\*HT44  
\*SR500  
\*HT32B  
\*HT37

**Hammarlund:**  
HX500  
\*HX50  
\*HX50A

**Heathkit:**  
SB110  
\*HW12  
\*SB100  
\*SB400

**E. F. Johnson:**  
Viking 200  
Valiant 500  
Courier  
Invader

**Lafayette:**  
HA250 (linear amplifier)

**National:**  
NCX3  
NCX5

**R.F. Communications:**  
RF301

**Swan Electronics:**  
120  
\*350  
\*400

**Transcon Electronics:**  
SBT-3

**KW Electronics:**  
\*KW600L  
KW2000  
KW2000A

**World Radio Laboratories:**  
Duobander 84  
\*Galaxy III.  
\*Galaxy V.

**Yaesu Musen:**  
FL100  
FL200  
\*FL1000

\* This equipment must be modified in such manner as to preclude operation with input power in excess of 150 watts to the final transmitter stage when employed for type A1 emission.

In those cases where it becomes necessary to make a measurement of the peak envelope power, the following method shall be employed.

Apply two non-harmonically related sinusoidal tones of equal amplitude to the single sideband transmitter which is operating into a matching resistive dummy load and an appropriate r.f. current meter. With an oscilloscope connected across this load, the transmitter with the carrier fully suppressed is adjusted for maximum power output coinciding with linear operation as indicated visually on the oscilloscope.

The power output is then calculated by the formula:—

$$P_m = I^2 R$$

where  $P_m$  = mean power in watts.  
 $I$  = r.f. current in amps. flowing in the dummy load.  
 $R$  = resistance of the dummy load in ohms.

The resultant figure, being mean power, is doubled to give peak envelope power and this value must not exceed 400 watts.

Your comments on the above measuring method and advice of other types of equipment which might meet requirements would be appreciated in due course, please.

Yours faithfully,  
C. M. Carroll,  
for Director-General.

★

## CONTEST CALENDAR

10th Dec. to 15th Jan.—Ross A. Hull Memorial Trophy V.h.f. Contest.  
4th/5th Feb.—33rd A.R.R.L. International DX Competition (phone).  
11th/12th Feb.—John Moyle Memorial National Field Day Contest.  
18th/19th Feb.—33rd A.R.R.L. International DX Competition (c.w.).  
4th/19th Feb.—A.R.R.L. Novice Round-up.

## WIRELESS INSTITUTE OF AUSTRALIA FEDERAL EXECUTIVE

The Institute can now offer annual subscriptions to the following Amateur Journals:

- ★ "QST"—Associate membership and renewals, \$5.40.
- ★ R.S.G.B.—"The Bulletin" is only sent with membership of the Society. Send for application form and FREE sample copy of the R.S.G.B. "Bulletin," \$5.95.
- ★ "CQ" Magazine, \$5.20.
- ★ "73" Magazine, \$3.50.

R.S.G.B. Publications and A.R.R.L. Publications available.

Send remittance to Federal Executive, C/o. Box 36, G.P.O., East Melbourne, C.2, Vic.



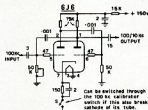
# HOW IS YOUR DIAL CALIBRATION?

BILL MAGNUSSON,\* VK3AHT

Not many years ago the person who had a 100 Kc. crystal calibrator was indeed fortunate. Today, however, a commercial receiver or transceiver which does not include this facility would be difficult to find. Such is progress. That which was once considered an accessory is now a normal functional part of the equipment. We refer to it constantly; to check calibration, meet skeds, give frequency checks, etc. But is it enough? How many times have you wondered as I did, "Just how accurate is the dial read-out or interpolation within these 100 Kc. check points?"

You may be surprised and probably not agreeably! In all but the most expensive equipment you will find small errors due to non-linearity in the tuning mechanism. True, they may be small, but what's the use of having dial read-out to one Kc. if the calibration is half a Kc. out at some point between the 100 Kc. calibration pips?

After having been accused a few too many times of being off frequency I decided to do something about it. But what? That was the question. A 50 Kc. crystal? Perhaps, but these are specials, very expensive and would probably require circuit modifications. A multivibrator, why not? They'd worked quite well for me in the past. But it had to be simple, the finished unit compact and above all no circuit mods. or holes to be drilled in the parent equipment.



FREQUENCY DIVIDER CIRCUIT FOR CALIBRATOR

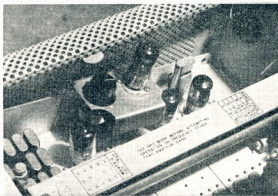
The little unit to be described filled all requirements admirably. There are no critical components, it can be constructed on a small panel 1 1/2 in. by 2 1/2 in., hardly bulky, which can be tucked away between a couple of valves and bolted to a suitable hole (there are usually plenty). Circuit connections are simply a matter of borrowing power from the parent equipment.

Basically this is it. The 100 Kc. calibrator output is used to lock a frequency divider at its 10th harmonic. The output, containing undiminished 100 Kc. and very slightly weaker 10 Kc. check points, is fed back to the receiver via a small coupling capacitor.

\* 350 Williamstown Rd., Yarraville, Vic.

## CIRCUIT

This is quite standard and was gleaned from a R.S.G.B. article of some years ago where it was actually one stage of a more pretentious frequency sub-standard. It contains no tricks and should work first time. The tube can, of course, be virtually any twin triode but the 6J6 is ideal. The switched cathode connection is necessary to prevent hash from being generated by the multivibrator when drive is not present from the 100 Kc. source.



## CONSTRUCTION

This will depend on the availability of space in the parent equipment. As can be seen in the circuit and the photograph, the only components of any size are the tube and the pot. These therefore make up most of the total bulk of the unit.

The photograph will give an idea of the size of my own unit which is fitted to the 75S-1 receiver.

## ADJUSTMENT

- (1) Identify two adjacent 100 Kc. check points and calibrate the dial.
- (2) Slowly advance the pot. from the earthy end while rocking the receiver dial back and forth around the 50 Kc. mark midway between the two previously identified 100 Kc. pips.
- (3) At approx. mid scale on the pot. a signal will be heard which should zero at 50 Kc.
- (4) Leave the pot. and count the number of signals between the two 100 Kc. pips. There should be nine. If not, advance or retard the pot. until nine pips can be counted.
- (5) The final setting can be obtained by tuning in one of the 10 Kc. pips and then slowly rotating the pot., first one way and then the other, until the divider drops out of sync. The correct adjustment is approx. half way between these points.

I used a panadaptor to set mine and this considerably simplifies the adjustment as the number of pips can be counted directly from the c.r.t. display.

## OPERATION

Once adjusted the unit is perfectly stable and the note at each 10 Kc. point is T9. Output is quite usable to 30 Mc., the 10 Kc. pips being about S2 at this frequency.

Used in conjunction with a receiver which has direct one Kc. readout on the dial, it should now be possible to hit a specified frequency within  $\pm 100$  cycles. This is quite good accuracy, indeed, to achieve any greater degree one would require equipment much more costly than the couple of dollars outlay for the above unit.

— . . . —

## A.R.R.L. INTERNATIONAL DX COMPETITION

Amateurs throughout the world are invited to participate in the 33rd A.R.R.L. International DX Competition. Special certificates of performance will be issued to the top phone and c.w. scorer in each country. In addition, a handsome plaque will be awarded to the continental high scorers (non W/VE), single operator, on phone and on c.w.

Dates: Phone—Feb. 4-5, March 4-5, 1967. C.w.—Feb. 18-19, March 18-19, 1967. Times: 0001 G.M.T., Saturday, to 2400 G.M.T., Sunday.

Object: DX stations QSO as many continental U.S. and Canadian stations as possible. Repeat contacts on additional bands are permitted.

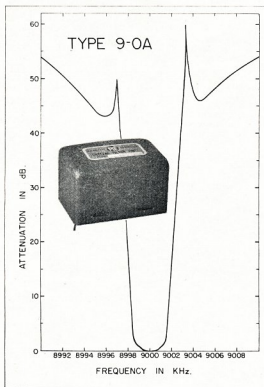
Points: Each complete contact counts three points. Incomplete contacts count two points.

Exchange: Send RS(T) and input power. (The W/VE will send RS(T) and his State/Province.)

Multippliers: On each band, your multipliers are the 48 continental U.S. States plus VE1-VE5 and VO. Your final multiplier is the sum of multipliers worked on each band. QSO points time the final multiplier equals the final score.

Logs: Logs must contain dates, times in G.M.T., bands, exchanges and points. Logs, with summary sheet and multiplier check list, must be sent to A.R.R.L. no later than April 22, 1967. Send to: A.R.R.L. International DX Competition, 225 Main St., Newington, Connecticut, U.S.A. 06111.





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This filter, supplied with two Style "D" carrier frequency crystals and sockets, comprises a package unit. With each unit a typical schematic circuit diagram is supplied.

**Specifications:** 6.0 dB Bandwidth: 3 Kc. min.  
40 dB Bandwidth: 6 Kc. max.  
Pass Band Ripple: 2 dB max.  
Insertion Loss: 4.5 dB.  
Input Termination 150 ohms plus 150 pF.  
Output Termination: 150 ohms plus 120 pF.  
Physical Dimensions: 2" x 1.375" x 1.125".

Recommended Oscillator Crystals: 8998.0, 9002.0 Kc.

**Price each package unit – \$30.00 plus tax**

Quantity discounts will be negotiated.

## Close Tolerance Gold Plated Crystals for Amateur Applications

Amateur Net  
(each includ. Tax)

|                          |           |  |               |
|--------------------------|-----------|--|---------------|
| ★ 1.8 Mc. to 14.999 Mc.  | ± 0.005%. | In Style "D" Holders, $\frac{1}{2}$ " pin spacing    | <b>\$4.85</b> |
| ★ 15.0 Mc. to 47.999 Mc. | ± 0.005%. | In Style "D" Holders, $\frac{1}{2}$ " pin spacing    | <b>\$5.05</b> |
| ★ 48.0 Mc. to 61.0 Mc.   | ± 0.005%. | In Style "D" Holders, $\frac{1}{2}$ " pin spacing    | <b>\$5.65</b> |
| ★ 100.0 Kc.              | ± 0.005%. | In Style HC13/U Holders, $\frac{1}{2}$ " pin spacing | <b>\$9.00</b> |
| ★ 1.0 Mc.                | ± 0.005%. | In Style "D" Holders, $\frac{1}{2}$ " pin spacing    | <b>\$9.00</b> |

Many other types and tolerances are available from our standard production.

Please consult us on your Crystal requirements.

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| PERTH:     | 151-155 BRISBANE STREET, PERTH  | " 28-4338      |
| HOBART:    | 141 MURRAY STREET, HOBART       | " 3-3707       |

# SIDEBAND

Sub-Editor: PHIL WILLIAMS, VK5XN

Main observations on the single sideband front this month have been the extensive use of this mode during the week-end of the "CQ" World-Wide DX Contest—phone section, and the Boy Scouts Jamboree-on-the-Air, both of which happened to fall together. The organisers of both of these had better get together and arrange different week-ends in future, as I heard so many people say that they would have liked to have been in both, but, of course, a prior arrangement with the Scouts precluded participation in the DX Contest.

The Jamboree is now a well established feature of the Scout calendar throughout the world, and the number of sideband transceivers operating in Scout Halls, with antenna systems erected by the boys was commendable. These small transceivers lend themselves to this type of portable operation very readily. A pleasing feature this year was the large participation by Girl Guides. There appeared to be many more groups of girls on the air this year, and they were very good operators, too.

Since the Jamboree I have had numerous enquiries from Scouts regarding the methods of studying for the exam and obtaining a licence, and these laid will certainly make good Amateurs.

## NETTING WITH TRANSCEIVERS

One hears many discussions on the air (and complaints) regarding netting and tuning up, especially the problems encountered with transceivers. The following points should be remembered and scrupulously observed:—

- (a) Tune the station in carefully until you consider that the voice sounds natural—not just intelligible.
- (b) After you have netted as well as possible, do not proceed to tune up the transmitter on the net frequency before you call.

It has been established that a male voice is intelligible with carrier insertion anywhere between minus 200 and plus 500 cycles per second from the correct frequency required for natural voice reproduction. While writing this I am listening to two VK3 stations, both using transceivers, using break-in with vox control, and about 200 c.p.s. apart. To me, one sounds quite natural and the other rather higher pitched, but both are perfectly intelligible. However, if I make the latter station sound normal—and I know his normal speaking voice, then the first station sounds anything but normal—quite ghastly, in fact.

I can only wonder whether my friend's transceiver oscillators are changing frequency between transmit and receive modes—this is possible—or whether he is just not very fussy about

tuning in. This oscillator frequency changing can sometimes occur with very strong signals actuating the a.g.c., and it is a good plan to check the oscillators, both crystal and v.f. types, on a separate receiver, if you are constantly receiving complaints about your netting and your procedures are apparently correct in other respects.

And now, on the subject of tuning up your transmitter or transceiver on a net frequency. I can only ask that you move to a clear spot on the dial to tune up, or preferably, as stated in the Handbook for the Guidance—using a dummy aerial, the most satisfactory of which is a large non-inductive resistor. Many of the antenna tuners "match boxes," or whatever they may be called, have a 50 ohm load built into them and this makes the job very simple.

Some transmitters and transceivers use an audio oscillator to provide a signal into the audio amplifier on

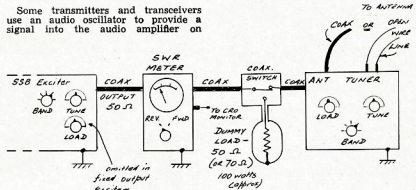


Fig. 1.—Set-up to give correct loading impedance to an s.s.b. exciter (or amplifier).

transceiver. This system of tuning up is quite good, but we must warn operators that, for example, the 1000 c.p.s. audio tone, if put on top of another net, can cause complete dislocation of the net and I sometimes wonder at the tolerance of net operators when they welcome (?) a new operator into the net after he has just tuned up for half a minute "bang" on top of the net stations.

I can only say, that if you do not possess a dummy load, then please move to a clear channel, or park on top of another source of noise (there are some infernal machines left running in the Amateur bands, and you can tell from the sound of them just what they are or are not doing) in order to get your tuning done. This subject is treated at some length, because I am quite sure some operators think they are putting out a "carrier" frequency, zero-beating with other (absent) carriers on the net, and therefore causing no interference.

## BAD SIDEBAND SIGNALS

Yes, there are plenty of them, and you'll hear more of them around as more stations come on. The causes are numerous, but I shall list some of the common causes here, in the hope that it may help the unfortunate sidebander who gets the thumbs down sign from his fellow Amateurs.

"Audio gain too high" is the commonest complaint of all, especially for the newcomer to sideband, who is anxious to get amongst the DX and does not watch either the meters or his enthusiasm, when working the weak, rare ones. The tendency to climb into the mike should be watched, and a "weather-eye" kept on the plate meter or output meter at all times. These should kick up to about half of the peak c.w. readings on test, when you speak. The handbooks usually tell you all about this and owners of commercial gear should read them carefully. The monitor oscilloscope is a very good monitor, and infallible in detecting flat-topping whatever the cause.

Incorrect loading of the transmitter is another frequent cause of broad distorting signals and even those exciters with variable loading controls should normally be adjusted using an s.w.r. meter followed by an aerial tuner. The improvements are quite amazing where

the aerial s.w.r. is high, as even if proper matching is possible, the resulting low or high Q of the output circuit may cause some queer results. The aerial tuner, Z-match, match box, a.c.u.—call it what you like—will make sure your final is presented with its correct load on the pi output tuned circuit. Linear amplifiers must be correctly loaded, otherwise spurious emissions may occur, even including parasitic oscillations at near output frequency. Sudden troubles with previously tame installations often result from broken aerials or feeders, for which the remedies are obvious. The s.w.r. meter will show up troubles of this sort very quickly.

Parasitic oscillations are diabolical things to cure, and I can only suggest that you be sure to include all the suppressors and chokes when you build and make provision for neutralising all class AB1 or AB2 linear amplifiers. You may operate on 80 and 40 without

(Continued on Page 10)



## PRINTED CIRCUITS AID AUSTRALIAN INDUSTRY!

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Don't worry... we're not neglecting our many friends who want a single circuit board. Send for our free folder on "How to prepare artwork" and for our price list. It matters little if you want one or a thousand boards... PW's price is most attractive. Many "Electronics Australia" designs are kept in stock and delivery is immediate. Special printed circuits are normally despatched within 7 days of receipt of your artwork. Artwork aids in the form of Solder Lands, Black Crepe Tapes, Clear Film and Transfer Letters are also available from Precision Windings at low cost. Write now!



52 Cambro Road, Clayton, Vic.  
Phone 544-7370

## SIDEBAND

(Continued from Page 9)

neutralisation, but not on 15 and 10 metres.

R.f. getting into the audio is another common cause of bad signals. This occurs with improperly shielded and filtered microphones and cables, especially where linear amplifiers are in use, and an older crystal microphone is retained in use. Keep the r.f. in boxes and low impedance co-axial cables, properly matched, in the shack, ground all of the equipment, and make sure the mike and its cables are well screened. Early audio stages must be screened and grids by-passed for r.f., and it is worth pointing out that these measures are better carried out while building than having to add them afterwards.

Again I would add, that if you receive a bad report, just accept it in the spirit in which it is given and get the fault repaired, using a dummy load on the transmitter for testing. The oscilloscope and station receiver may be very useful for tracking down such faults.

As a final word of warning—please keep the covers on the linear tube compartment so that you will not kill yourself on the e.h.t. supply to the final plates. A 6146 will stand 800 volts, but the operator probably will not!

Next time I have a few notes on input circuits for grounded-grid amplifier stages. 73, Phil VK3NN.

## W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. Position in the list is determined by the first number shown. The first number represents the participant's total countries less any credits given for deleted countries. The second number shown represents the total D.X.C.C. credits given, including deleted countries. Where totals are the same, listings will be alphabetical by call sign.

Credits for new members and those whose totals have been amended are also shown.

| PHONE  |         |        |         |
|--------|---------|--------|---------|
| VK3AHO | 310/222 | VK4HR  | 261/277 |
| VK5MS  | 309/230 | VK2JZ  | 253/265 |
| VK5AB  | 300/214 | VK3TL  | 241/245 |
| VK6MK  | 286/215 | VK2AE  | 223/237 |
| VK6RU  | 296/219 | VK2AAK | 221/225 |
| VK4FJ  | 273/290 | VK2APK | 217/220 |

| New Members: |         |       |         |
|--------------|---------|-------|---------|
| VK5GX        | 101/101 | VK6XX | 110/110 |
| VK4PX        | 108/109 |       |         |

| Amendments: |         |        |         |
|-------------|---------|--------|---------|
| VK3SM       | 117/119 | VK3AGH | 108/118 |

| C.W.   |         |        |         |
|--------|---------|--------|---------|
| VK3KB  | 317/240 | VK3AGH | 276/289 |
| VK2ADE | 291/313 | VK3AHQ | 276/298 |
| VK3CX  | 291/312 | VK3NC  | 269/280 |
| VK3QL  | 288/308 | VK3ARX | 261/269 |
| VK4FJ  | 286/308 | VK6RU  | 251/272 |
| VK2EO  | 279/300 | VK3XB  | 246/261 |

| Amendments: |         |       |         |
|-------------|---------|-------|---------|
| VK3YL       | 239/256 | VK3KS | 203/209 |
| VK3RJ       | 231/244 |       |         |

| OPEN   |         |        |         |
|--------|---------|--------|---------|
| VK2ADE | 305/329 | VK4HR  | 279/301 |
| VK3AGH | 305/323 | VK2ACX | 270/300 |
| VK6RU  | 301/324 | VK3ARX | 270/278 |
| VK6MK  | 300/317 | VK3NC  | 267/287 |
| VK4FJ  | 292/314 | VK3JA  | 265/283 |
| VK2VN  | 293/300 | VK3TL  | 260/284 |

| New Member: |         |       |         |
|-------------|---------|-------|---------|
| VK4CK       | 103/104 |       |         |
| Amendments: |         |       |         |
| VK2SG       | 161/165 | VK4PX | 143/148 |

## BRIGHT STAR CRYSTALS

### FOR ACCURACY, STABILITY, ACTIVITY AND OUTPUT

Our Crystals cover all types and frequencies in common use and include overtone, plated and vacuum mounted. Holders include the following: DC11, FT243, HC-6U, CRA, BTG, Octal, HC-18U:

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100 Kc. and 1000 Kc. Frequency Standard, \$17;  
plus Sales Tax.

Immediate delivery on all above types.

AUDIO AND ULTRASONIC CRYSTALS—Prices on application.

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ALSO AMATEUR TYPE CRYSTALS—3.5 AND 7 Mc. BAND.

Commercial—0.02% \$7.25, 0.01% \$7.55, plus Sales Tax.

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CRYSTALS FOR TAXI AND BUSH FIRE SETS ALSO AVAILABLE.

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# JOHN MOYLE MEMORIAL NATIONAL FIELD DAY CONTEST, 1967

SATURDAY, 11th FEB., 0800 G.M.T., TO SUNDAY, 12th FEB., 0800 G.M.T., 1967

The Federal Contest Committee of the Wireless Institute of Australia invites all Australian Amateur and Short Wave Listeners to participate in this Annual Contest, which is held to perpetuate the memory of John Moyle, whose efforts advanced the Amateur Radio Service.

There are two divisions of this Contest, one of 24 hours continuous duration, and one of 6 hours continuous duration. The six-hour period has been included to encourage the operator who is unable to participate for the full 24-hour period.

Operators using 25 watts or less input to the final stage will be considered for a certificate where his activity warrants its issue.

## DATE

From 0800 G.M.T., 11th February, to 0800 G.M.T., 12th February, 1967.

## OBJECTS

The operators of Portable and Mobile Stations within all VK Call Areas will endeavour to contact other Portable/Mobile and Fixed Stations in Australia and Overseas Call Areas.

## RULES

1. There are two divisions, one of six (6) hours, and one of twenty-four (24) hours duration. The six-hour period for operating may be chosen from any time during the Contest, but the six-hour period so chosen must be continuous. In each division, there are six sections:—

- Portable/Mobile Transmitting, Phone.
- Portable/Mobile Transmitting, C.W.
- Portable/Mobile Transmitting, Open.
- Portable/Mobile Transmitting, Multiple Operation, open only.
- Fixed Transmitting Stations working Portable/Mobile Stations, open only.
- Reception of Portable/Mobile Stations.

2. All Australian Amateurs are encouraged to take part. Operators will be limited to their licensed power. This power shall be derived from a self-contained and fully portable source.

(a) Portable/Mobile Stations shall not be situated in any occupied dwelling or building. Portable/Mobile Stations may be moved from place to place during the Contest.

No apparatus shall be set up on the site earlier than 24 hours prior to the Contest.

All Amateur bands may be used, but no cross band operating is permitted. Cross mode operation is permitted.

Entrants in Section (d) for Multiple Operator Stations can set up separate transmitters to work on different bands at the same time. All such units of a Multiple Operator Station must be located within an area that can be encompassed by a circle not greater than half a mile diameter.

For each transmitter of a Multiple Operator Station a separate log shall be kept with serial numbers starting from 001, and increasing by one for each successive contact. All logs of a Multiple Operator Station shall be submitted by the operator under whose Call Sign the transmitters are working. No two transmitters of a Multiple Operator Station are permitted to operate on the same band at any time.

3. Amateurs may enter for any section.

4. One contact per station for phone to phone, also one for c.w. to c.w. per band is permitted. Cross mode operation will be accepted for scoring.

5. Entrants must operate within the terms of their licences and in particular observe the regulations with regards to portable operation.

6. Serial numbers consisting of RS or RST report plus three figures commencing with 001 and increasing by one for each successive contact shall be exchanged.

## 7. Scoring—

### (a) Portable/Mobile Stations:

For contacts with Portable/Mobile Stations outside entrant's Call Area ..... 15 points

For contacts with Portable/Mobile Stations within entrant's Call Area ..... 10 points

For contacts with Fixed Stations outside the entrant's Call Area ..... 5 points

For contacts with Fixed Stations within the entrant's Call Area ..... 2 points

### (b) Fixed Stations:

For contacts with Portable/Mobile Stations outside entrant's Call Area ..... 15 points

For contacts with Portable/Mobile Stations within entrant's Call Area ..... 10 points

8. The following shall constitute Call Areas: VK1, VK2, VK3, VK4, VK5, VK6, VK7, VK8, VK9 and VK0.

9. All logs shall be set out under the following headings: Date/Time (G.M.T.), Band, Emission, Call Sign, RST/No. Sent, RST/No. Received, Points Claimed. Contacts must be listed in numerical order.

In addition, there shall be a front sheet showing the following information:—

Name ..... Address .....

Call Sign ..... Section .....

Division ..... (6-hour or 24-hour)

Points Claimed .....

Call Sign of other op./s (if any) .....

Location of Portable/Mobile Station ...

From ..... hours to ..... hours

A brief description of equipment used, and points claimed, followed by the declaration:

"I hereby certify that I have operated in accordance with the rules and spirit of the Contest."

Signed ..... Date .....

10. The right is reserved to disqualify any entrant who, during the Contest, has not observed the Regulations and the Rules of this Contest, or who has consistently departed from the accepted code of operating ethics.

11. The decision of the Federal Contest Manager of the Wireless Institute of Australia is final and no disputes will be entered into.

12. Certificates will be awarded to the highest scorer of each section of each division. Additional certificates may be issued at the discretion of the F.C.C. The six-hour certificates cannot be won by a 24-hour entrant.

## 13. Return of Logs:

All entries must be postmarked not later than 28th February, 1967, and be clearly marked "John Moyle Memorial National Field Day Contest, 1967," and addressed to:—

Federal Contest Manager, W.I.A.,  
55 Moulden Ave., Mt. Yokine,  
Western Australia.

## RECEIVING SECTION

14. This section is open to all Short Wave Listeners in VK Call Areas. The Rules shall be the same as for the Transmitting Stations, but may omit the serial numbers received.

Logs must show the Call Sign of the Station heard, the serial number sent by it, and the Call Sign of the Station being worked.

Scoring will be on the same basis as for Transmitting Stations. It will not be sufficient to log a station calling CQ. A station may be logged once only for phone and once for c.w. in each band.

Awards: Certificates will be awarded for the highest scorer in each Call Area.



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| ★ Hy-Gain TH3JR, 10-15-20 mx 3-element Beam   | £100            |
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| ★ Hy-Gain 14AVQ, 10-15-20-40 mx Vertical, coax-fed  | £50             |
| ★ Hy-Gain 18AVQ, same as 14AVQ with 80 mx coverage added  | £75             |
| ★ Webster Bandspanner, all-band mobile centre-loaded Whip, with bumper or body mounting   | £50             |
| ★ D.e.-D.e. Mobile Power Supplies for Galaxies and Swans  | \$100 and \$120 |
| ★ Alliance U98 and CDR TR44 and Ham-M Antenna Rotators, with 230v. a.c. indicators-control units  | \$55 to \$180   |
| ★ Type Swan SW350 Vernier Dial Movement assembly  | \$3             |
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| ★ Used Eddystone 888A 160-10 mx bandspread Receiver   | \$225           |
| ★ Used Wagner 1A all-band s.s.b. Transceiver, with Wagner a.c. supply and speaker unit  | \$350           |

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Sub-Editor: CYRIL MAUDE, VK3ZCK  
2 Clarendon St., Avondale Heights, W.2, Vic.

Well the Festive Season is around again with the Ross Hull Memorial Contest, the VK3 New Year's Field Day and let's hope lots of DX. This will be my last note until February so the compliments of the Season and best of DX. How about this for a New Year's resolution: Send in "A.R." notes neatly typed on half a column page by 25th of the month. 73, Cyril ZCK.

#### V.H.F. CONTEST/FIELD DAY

The VK3 V.h.f. Group are holding a large scale contest cum field day in N.S.W. over the New Year Week-end. All Divisions are invited to participate in this previously successful contest which logs have been received from all States of VK and ZL.

The contest will be of three days' duration, i.e. Sat, Dec. 31, Sun, Jan. 1, and Mon, Jan. 2. It is felt that this gives keen operators a reasonable amount of time in the field. Perhaps interstate V.h.f. Groups could organise stations in their own States to help make this the best yet held.

The times of operation will be as follows: Saturday, 31st Dec., 1700-2100 hrs. E.A.S.T. (1700-2100 hrs. 1/12/66) on Sunday, 1st Jan., 0500-0900 hrs. E.A.S.T. (1900-2300z 1/1/67) period 2, 1000-1100 hrs. E.A.S.T. (1000-0900z 2/1/67) period 3, 1000-1100 hrs. E.A.S.T. (1000-0900z 2/1/67) period 3, Monday, 2nd Jan., 0700-1100 hrs. E.A.S.T. (0700-1100z 2/1/67) period 3, Monday, 2nd Jan., 0500-0900 E.A.S.T. (0500-0900z 2/1/67).

Last year's schedule was made with ZLs at 0400 E.A.S.T. the result being a VK-ZL contact. There are three sections for the contest: Section (a), home station—open, Section (b), field station—open, Section (c), field station—2 metres only.

Open sections are all bands 144 and up. Six metres is not included owing to peculiar propagation conditions.

Scoring is as follows: For 144 Mc., 0-50 miles, 1 pt.; 50-75 miles, 2 pts.; 75-100 miles, 3 pts.; 100-150 miles, 6 pts.; 150-200 miles, 10 pts.; 200-250 miles, 15 pts.; 250-300 miles, 20 pts.; 300-400 miles, 30 pts.; 400-500 miles, 40 pts. For 432 and 576 Mc., multiply by two, and for 1296 Mc., multiply by three.

The normal numbering system will apply to all logs. For each Log may be submitted for all periods worked, but only one period may be submitted for scoring with the exception of the message handling section, which should be submitted as a separate part of the contest—therefore you may submit a message handling log along with the DX log.

Interested parties should contact the contest committee of the VK3 Group for further details. The log should be sent to the committee by the following details: Name, Address and Call Sign, proposed location, frequency of operation and expected time of operation—this applies to either home or field stations. The VK3 Group will act as the collection point for all information and will keep all interested parties informed. Please send in logs as soon as possible to Mr. P. Carter, VK3ZPC, 5 Bell Place, Mt. Pritchard, N.S.W.

#### HUNTER RIVER BRANCH

52 Mc.: Things have been quiet for the month of October, the only break throughs for this net being one reported by 22WV who hit the 52 Mc. Channel. I have been heard often but think this is only Wagga or Bega.

50 Mc.: The 52 Mc. boys have been keeping an eye on the band, but nothing so far. The 52 Mc. net is in operation at 10 a.m. Saturdays and 10 a.m. Sundays. The boys have been the best, what with the storms and west winds, the band has been noisy. Kev Z2KW now has his 6145 final going on this band and has been working 22WV. Kev Z2MO he only had 300v. and not 600v. on it, so you VK3s look out, and bolt down your antenna. The boys have been working a lot of VK3s run in excess of 60w. on 6 mhz as well—Ed.) By the time this gets into print, the boys will have had a few more of a number of times. See you all on 52 Mc.!

144 Mc.: The main events this month have been our yearly Convention and Field Day, with our monthly meeting on the Friday night

with a competition for home-built gear. This was won by Bill Z2WM, who described a 6 and 2 mhz tx with a common modulator. His prize was a "Radio Designer's Handbook" as now you VK3s can get all the answers from Bill. It is noted that only four took part in the competition, all being Z calls.

On 12th of the month the band opened to Sydney, quite a few were caught unprepared. The lucky ones were Gordon Z2SG, Bill Z2WM, Des Z2DN and the band stayed open till fairly late. As far as 1 stand, Des Z2DN worked Z2CF on 12th Mc., while the band was open. 73, Mac Z2MO.

#### NEW SOUTH WALES

The V.h.f. Group Christmas Party will be held on 10th Dec. at QTH of Joe Z2OO at 7 Tralee Ave., Killanney Heights, starting at 8.30 p.m. There will be a fox hunt prior to the event for details of this keep an ear to the broadcast. If you intend coming, please advise Z2SK or Z2OO so we know how many to cater for.

By now the path to ZL should have opened again—if last year was any indication. We should be in for some good openings.

It has been noted that attendees at the fox hunts have dropped a bit, so come on you mobile enthusiasts. How about coming along for a morning exploring the bush and listening as the hot dogs and coffee at the conclusion of the event?

The results for the VK3 V.h.f. R.D. Contest are as follows: 1st, Tony Z2VJ, 2nd, Stephen Z2SK; 3rd, Col 2YV; 4th, Arthur Z2GA. Congratulations to Tony who has done the hat-trick in 1966. The results for the 1966 contest will be presented to Tony at the Christmas Party.

The October meeting was very well attended, with Keith ZBK lecturing on the uses of laboratory type test equipment. Equipment on display included a spectrum analyser, frequency counter, audio signal generators and many other pieces of test equipment.

The December meeting will be the Annual Auction, which is usually a good crowd. The January meeting is an open night when anyone can get up and talk on his pet subject or show slides or movies. The next speaker to hear from one of the country stations who wish to work into Sydney—particularly Orange, Bathurst, Canberra, etc.—will be the 22WV. It is hoped to hear from any Sydneysiders wishing to work into Melbourne—Ed.)

Reg Z2MR is out regularly from Canberra and posts on Mt. Ainslie, with Z2CG a couple of weeks ago. The signals into Sydney were excellent. 73, Z2SK.

#### VICTORIA

Conditions over the month of October have been reasonably good with an excellent opening to VK7 on 2 mhz and all States on 6 mhz. I would like to request all VK operators wishing to work ZLs to (a) On 2 mhz call with their beacons East between 1700 and 1800 E.A.S.T. (2) On 6 mhz listen for the ZL Chan. 1 v.t. on 50.75 and call on six metres between 52 and 53 Mc. This little request is from Harry ZL2AAZ.

It is hoped to have a 6 mhz beacon operating from Macquarie Island at the end of 1966. The proposed call sign for this beacon is VK3WV Sunday morning broadcasts for further information. 73, Cyril Z2CK.

#### SOUTH AUSTRALIA

Strange things are happening it would appear with respect to sporadic E DX on 6 mhz. Since the 19th and 11th Sept. not one signal of DX sporadic E has been seen in VK3. Listen if you disregard the Channel 0 transmissions from both VK3 and VK4.

On the local front the main 6 mhz activity is provided by the day-faithful watch dogs on the band and also by W.I.C.E.N. on their net frequency of 53.1 Mc. Geoff 2TY, the co-ordinator, has been successful in obtaining various means commissioned in excess of 25 mobiles on the net. Numerous exercises have been conducted to improve operating procedures. Nonetheless, the results obtained by Geoff have been extremely gratifying. To test the capabilities of the group, an exercise was conducted by the committee on the long week-end on October 8 and 9. Briefly, the object of the exercise was to conduct message exchanges between stations in the Port Pirie to Port Pirie, an approx. distance of 150 miles, utilising low power mobiles using only whip antennas, placed at strategic locations. In all, 15 pairs of stations were contacted and the results were most commendable, many faults were observed in operating procedures. Officers of the F.S. who were present were impressed by what they saw.

On the same week-end, Jim Z2GV, with Edwiz Z2JH, conducted a message exchange received television signals from Maitland SAO,

Rick Z2FQ and Andrew Z2BP, stationed portable at Willunga Hill, a distance of 96 miles. Photographed evidence of the received pictures was immediately forwarded to the SAO, available at the receiving location. The receiving equipment at the Hummocks consisted of a 10 Mc. transistorised converter to a commercial amplifier, i.v. The tx used was the home station of Maitland SAO transported complete to the portable location and powered by a 100 watt motor generator. Whether or not this constitutes an Australian record for Amateur Television transmissions is incidental as the Amateur Television community has been busy with their results so far and intend raising this distance of 96 miles in the near future. They are also intending to make it a two-way, contact.

With respect to 2 mhz activity, the only news of any consequence comes from Port Pirie under Jim Z2JH, who is currently working a.s.b. I would appear from results to hand so far that the t.v. situation has been minimised and perhaps extended hours of operation from the Pirie district will be available. 73, Colin Z2JH.

#### MT. GAMBIER

The South Eastern Radio Group would like to advise all Amateurs that the June Convention that was postponed will be held over the long week-end at the end of January. Those who are not members of the group are automatically registered for the January one, but others can register but no guarantee of a place. It is a great pleasure. The group suggested that if you book, first make your own accommodation arrangements. Any further information can be obtained from Colin Hutchesson, ZSKF, Yahl, via Mt. Gambier.



## YOUTH RADIO CLUBS

By the time this is printed, it will be the season of good wishes. I have a few myself. First a load of good wishes to all the brave instructors who weathered the 1966 storms—most of them have had a very hard time. I have good wishes to all the W.I.A. administrators who have helped Y.R.S.—they will be happy to hear you're still there. I have good wishes to Rex ZYA who has given so much for years before 1968. Special good wishes to the young graduates of Y.R.S. who are giving back to the Y.R.S. by their own efforts. I have given—in some cases more—than I have given to all the budding electronic experts—these are the ones who are giving back to the Y.R.S. by their own efforts. I have given a few best wishes to my four readers over the past few years—I'm hoping this is my last one. These are not meant to be a cheering haul for time. Y.R.S. will continue to expand and a future correspondent will have plenty of events to chronicle.

The Articles of Association of the Youth Radio Clubs Scheme of Australia (Victorian Division) has been printed and no doubt Howard Rider will discuss the idea or send you a copy if you get in touch. The new development should be watched with interest. Certainly Howard and his committee are very keen to make the Y.R.S. a reality.

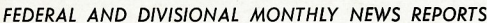
Young graduates of Y.R.S. in VK3 are putting a great deal back into the scheme, particularly Roger 1RD and Susan ZB8R. Roger is a highly motivated young man who has been a member of Y.R.S. but also puts a lot of work (with help from Susan) into producing the "FP3 and PG4 Bulletin", running from 16 to 18 pages and containing a lot of news and hints—4 cents a copy. Roger has also prepared a correspondence course for Junior Certificate. This contains a lot of theory notes (although of course being 29 pages, is not a text book), a set of assignment questions and other necessary material for revision and practical sections of Junior Certificate. This is mainly prepared for me by members of Roger's Postal Group but is very likely to be suitable for clubs. Anyone who would like to see how another club is instructed should send 40 cents to Roger (with 4 cents postage).

This raises the point of expenses. Costs are mounting as the scheme expands. There are two possibilities at the moment—one is to charge more for the material and the other is to have a more free service (is not valued), and the other is to get many or large donations. At the very least, donations of stamps could be sent back to the Division or group which sends out material. Christmas Island Club donated £23/11/6—why can't others give something?

I hope I'm not doing a Nellie Melba farewell, but I will again say "Cheers" to my four friends who are contributing to the new correspondent. 73, Ken 1KM.







Page 17





DF-2

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Phones: 60-1475--6-7

vention station, 2WG, was active over the week-end and aroused the interest of the Wagga City Council's representative (Ald. R. J. Harris). He said the fact that a radio network was available for use in times of emergency was very reassuring.

Pierce also released details of this year's Remembrance Day Contest. As the results of this contest are published in the next issue, notes appear in print, we will confine our remarks to offering congratulations to the VK9 and VK1 and VK2 State section winners: Phone-VK1QL (410 pts.), VK2XA (675 pts.); C.W.-VK9SL (403 pts.); Open-VK9SL (403 pts.); VK2AH (403 pts.); VK2ZCF (84 pts.); also first in Commonwealth; Receiving-VK1, J. Hurren (375 pts.), VK1, A. Nutley (1063 pts.).

Keith 2AKX said that there was an attendance of 100 at the 1967 Remembrance Day Convention in October, and the field day was also well patronised. Divisional Council was represented at the dinner by Cyril ZCS, while two other councillors (Peter 2AXJ and Stan 2ZRD) as well as the secretary/treasurer (Mrs. Betty Gerdes) with OM, Barry 2ZAH, attended the field day. Keith went on to say that the Hunter Branch will hold another field day on 4th Dec., at Bolton Point Park. There will be the usual refreshments and the atmosphere will be a more informal atmosphere. Visitors from Sydney and other areas would, as usual, be very welcome.

As reported in previous notes, Syd 2SG had tendered his resignation from the position of QSL officer, after a period of seven years in office. At the October meeting, he announced that from 25th Nov. onwards QSL cards will be handled by Roger 2ZIG, with the outwards cards still being dealt with by Syd 2AGD, the known QSL Box No. 1734 would be retained. Following the above announcement, Bill 2YB moved that a hearty vote of thanks be accorded Syd for his good work on behalf of the Division, and this was carried by acclamation.

The Education Officer, Harold 2AAL, advised that he had arranged a selection of records for the December meeting. Members are asked to take special note that this meeting will be held on the third Friday, 15th Dec. The fourth Friday is only one month. The December meeting is a family night, so take Mum and the Harmonics along for a night out. As this will be the last issue for 1966, may wish to take a moment to wish you a Merry Christmas, with health, prosperity and good DX during the coming year. TR, Ivan 2A1M.

#### HUNTER BRANCH

The November meeting of the Branch, held at the Technical College, was addressed by Ian 2AZN, of the staff of "Electronics". Ian gave a detailed and very interesting talk on the a.s.b. transmitter which he has designed, to be featured in the magazine this month. The unit uses 21 transistors and 16 valves and can operate at 160 mhz, either upper or lower s.b. From questions which followed the lecture, it was evident that members had thoroughly enjoyed the visit by Ian and were anxious to find out as many things as possible about the new unit. Stuart 2AYF expressed the thought that the unit was a bit of a joke which was carried by hearty acclamation.

There was a further sale of hand drawn aluminium rods suitable for v.h.f. beams and h.f. has been ordered for the last few weeks, possibly due to the conditions which now exist regarding our friends in the P.M.G. Department. Some have recently had their sum is to be transmitted to the Divisional headquarters at the end of the month.

Quite a deal of activity on both h.f. and v.h.f. has been going on during the last few weeks, possibly due to the conditions which now exist regarding our friends in the P.M.G. Department. Some have recently had their sum is to be transmitted to the Divisional headquarters at the end of the month.

Troubles have been the order of the day with 2AWX of late and it has been increasingly difficult to hear the broadcasts. Men who know a little about the matter report that the work is going on to improve the position and it is expected that soon the reliable signal of the station will be restored. Until then, anything might, and probably will, happen.

On v.h.f., some good 6 mhz openings have appeared during the month and both Bill 2ZWM and Kevin 2ZBN reported that they had plenty, so suppose the others of us on this band had had the same success. Des 2ZDN, who uses his vertical collinear to monitor DX, stated that he was out a week or so back when he heard what appeared to be an opening. He scored again, making solid contact both ways with Dick 2ZCF on 432. The

### OBITUARY

#### DONALD BRADER KNOCK (EX VK6NO)

As we go to press we learn with much regret that Donald Brader Knock (Ex VK6NO) had passed away in hospital on 31st October, following a lengthy illness. Undoubtedly it would be true to say that both the name Don Knock and the call VK6NO were well known to many known combinations among Amateurs in this country, particularly among the call VK6NO, which was a very well known Radio goes back prior to World War II.

Born in Southampton, Lancashire, 68 years ago, Don saw service in World War I. Being an adventurous type, he joined the 1919 expedition to Russia in which proved to be an abortive attempt to overthrow the Bolsheviks who had taken over the country following the Russian Rebellion.

Having served with the Engineers, with emphasis on radio communication, Don took out a G call on his return to England in the early 1920s.

Arriving in Australia around 1925, he undertook the organisation of radio communication for the Vestey Meat Company at Port Lorne, and his efforts there resulted in considerable progress being made in opening up the North-West.

Another of Don's interests was radio journalism and he continued a rather chequered career by publishing a monthly magazine, "Radio", and later as the New Radio Editor of the Sydney Bulletin. A post-war attempt to re-enter the radio field was made, but never prospered. Still later, he was employed by Philips Electrical Industries and in a civilian capacity with the Department of Navy. About 10 years prior to his death, Don surprised his friends by disposing of his gear and relinquishing his call sign. However, he continued to take an interest in Amateur radio, in spite of a deterioration in his health.

Perhaps we could say that one of Don Knock's greatest contributions to the Radio was in v.h.f., for during the 1930s, he and other kindred souls carried out much pioneering work in the v.h.f. field. He was the author of the R.R.L. Antenna Handbook carries a description and photograph of a 56 Mc. beam antenna developed by him. The N.S.W. Division of the N.E.C. was well represented at the funeral on Thursday, 3rd Nov., which took place at Eastern Suburbs Crematorium following a service at St. Mary's Church of England, Waverley.

To Mrs. Knock and son, Rodney, may we offer our sincere sympathy and behalf of all members of the Wireless Institute of Australia.

reliability of this frequency between the two cities appears to be improving and the chaps just mentioned have fairly regular contacts.

Nobody in the Branch area appears to have hit a high spot in the R.C. Contest, but Geoff 2BGF from Taree was up among the leaders and quite a number of Newcastle and Cessnock stations were reported to regret that they forgot to send their logs in. One good excuse was the incidence of the 'flu during that week-end, and many of the boys who had won the contest were away from home in another activity. The Scout Jamboree on the Air and so impressed the Mayfield boys who were in the contest that they agreed to request that he become official signalling instructor at the Scout Hall. Bob is looking for a cheap 2000ZCZ or similar for this purpose, but 2B0B/P may go on the air. Perhaps you may be able to help him.

Another of the club members, Susan 2BSB is about to commence operation on 142 mhz with a carphone as soon as crystals arrive for the unit. Jan 2BIO has made the necessary conversion and the set plays but the arrival of crystals is still awaited. The set is at home. John Bedford still awaits his call sign so that he too can go on the v.h.f. bands. And guess who 2AKX is? I must have said that he was. Another car from Malaya this time, has arrived to add to the collection for those 14 mhz. c.w. contacts. Just remember to go on [I] have the DXCC-pirate. Whoever uses the call sign certainly has some contacts! Please sir, show yourself, patch, cork leg and all, and tell you we are there.

In case the postal authorities or whoever, allows you to read this before the end of December, you will please note dear reader, some interesting facts about coming events.

The next meeting of the Branch will be at the usual place, Room 6, Clegg Building, Newcastle Tech. College, on Friday, 2nd Dec. Colonel 2CS is expected to give some reports on trip overseas and supper—I have been looking forward to this all year! The Sunday following there will be a Field Day at Bolton Point Park with no charge for admission, you know, Christmas and all that, and finally, but perhaps most important, there is no meeting in January. The first meeting in 1967 will be on Friday, 3rd Feb. 1967, which, although you may not know it, is not far off. So it remains only to wish you a good Christmas, a prosperous New Year, and all the best from President and fellow members of the Hunter Branch, including your scribe, 2AKX.

#### CENTRAL COAST

The last meeting of the Central Coast Branch was held on Oct. 21 at the Gosford School of Arts. Ernie 2E1G gave a very interesting illustrated talk on his recent trip to the South Pacific which had everyone mentally planning a future excursion to similar places. Honians seemed to be the most interesting port-of-call and from the pictures was certainly very lush.

We had several visitors from Newcastle and Sydney and, as usual, it was a most enjoyable evening. The final natter over a cup of tea and coffee was given by the President.

We have had word from Phil 2TX, who is travelling with his XYL somewhere in the Middle East. He had a few days off and was able to meet a few Hums. He says that during the monsoons they take down their quail (wonder why?) and then re-erect them after the blow is over.

Our Field Day will be held at Gosford in mid February 1967. It will be at the usual place, Bolton Point, and the day offers many attractions for all the family. All activities and meals are included in the entry fee.

Happo to report that Muriel 2A1A is feeling much better. She spent a little time on the air now. TR, Mon 2AKX.

### VICTORIA

#### I.T.U. FUND ACKNOWLEDGMENTS

A. K. Ballantine, 2AKB, \$2; J. Humphreys 2AKH, \$2.15; G. Sutherland, 3ZSU, \$2; V.R.I. Wireless Club, 3R1, \$2; G. Gillingham, \$2; D. Long, 3ZVL, \$2.

#### WESTERN ZONE

Of major importance in our notes this month is a report on the proceedings of our Annual Convention, which was held at the Bordertown, S.A. The combined gathering of Amateurs from VK3 and VK5 was a most successful affair which attracted members from Adelaide, Melbourne, Warrnambool, Mt. Gambier and a good roll-up from our own Zone.

The initial point of convergence was the home of Tony 2ZAI, where the hungry travellers, some arriving by aeroplane and motor bike—made good use of Tony's splendid barbeque facilities. It was not quite warm and dry as they all try out their new gear. Tony! Bob 2ARM had set up his h.f. gear to talk in the mobiles and 2 mhz. carphones also were present to augment this. Tony's v.h.f. shack attracted a lot of admirers with the set-up reminiscent of a N.A.S.A. tracking station.

At the Annual General Meeting, Bill 2ZAX was elected our new Secretary, allowing Bill 3AKW (our Secretary for the past 15 years or so) to step down for a well earned rest.

### A.O.C.P. THEORY CLASS

The Victorian Division of the W.I.A. will commence a theory class in February 1967.

Those wishing to enrol should do so immediately by contacting the Administrative Secretary, P.O. Box 36, East Melbourne, or by phoning 41-3535.

# ● DISPOSAL BARGAINS ●

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## NEW VALVES

|       |           |        |           |               |           |         |           |            |           |           |
|-------|-----------|--------|-----------|---------------|-----------|---------|-----------|------------|-----------|-----------|
| 1A3   | 50c       | 574    | 1.75      | 6CW4          | 1.75      | 7L7     | 75c       | 866A       | \$1.25    | 3-43      |
| 1A5   | 50c       | 574GB  | 1.75      | 6F8           | 50c       | 7N7     | 75c       | 902        | 50c       | 17-02     |
| 1A7GT | \$2.50    | 5V4G   | \$1.75    | 6G6           | 75c       | 7N7     | 35c       | 8-42       | 50c       | \$7.00    |
| 1C7   | 50c       | 5Y3    | \$1.25    | 6G6G          | \$2.50    | 12A5    | 50c       | 905        | 50c       | 50c       |
| 1D4   | 75c       | 5Y4    | 75c       | 6H6GT & Metal | 12A17     | 50c     | 906       | 50c        | 50c       | 50c       |
| 1D8   | 75c       | 5Z3    | 1.75      | 75c           | 12        | for \$2 | 12A7T     | 75c        | 983A      | 50c, 3-42 |
| 1F5   | \$1.00    | 5A3    | 75c       | 6J5GT         | \$1.00    | 12A7U   | \$1.50    | 1816       | \$1.50    | 50c       |
| 1H5   | 75c       | 5A5    | 75c       | 6J5           | 75c       | 3-42    | 12A7A     | 50c        | 1835      | 50c, 5-42 |
| 1K5   | 50c       | 5AB7   | \$1.00    | 6J7G          | 50c       | 3-42    | 12A7E     | 75c        | 1835      | 50c, 5-42 |
| 1K7   | 50c       | 5AC7   | 50c, 5-42 | 6K6           | \$1.00    | 12BDE   | 50c       | 1838       | 50c       | 50c       |
| 1L4   | 50c       | 5AG7   | 50c       | 6K7           | 50c       | 12C3    | 50c       | 5636       | 50c       | 50c       |
| 1L5   | \$1.00    | 5AG7   | \$1.25    | 6K8GT         | \$1.25    | 12J5    | 50c       | 5783       | \$2.80    | 50c       |
| 1L7N5 | 50c       | 5A7S   | 75c       | 6K8 Metal     | \$2.00    | 12SA7GT | \$1.00    | 6921       | \$1.00    | 50c       |
| 1M4   | 50c       | 5AK5   | \$1.50    | 6L7           | 50c       | 12SC7   | 50c       | 8004       | 50c       | 50c       |
| 1M5   | 50c       | 5AL5   | \$1.40    | 6N7           | 50c       | 12SG7   | 75c       | EA50       | 10c, 10-1 | 50c       |
| 1P5   | 50c       | 5AM5   | \$1.80    | 6N7           | 75c       | 12SK7   | 50c       | ECC35      | \$2.00    | 50c       |
| 1Q5   | 50c       | 5AM5   | \$1.00    | 6S5           | 75c       | 12SN7   | 50c       | ECH35      | \$2.00    | 50c       |
| 1R5   | \$1.80    | 5ANT4  | \$1.65    | 6SA7          | 75c       | 12SO7   | 50c       | EC1355     | 75c       | 50c       |
| 1S2   | \$1.75    | 5AR7GT | \$2.10    | 6SC7          | 75c       | 12SR7   | 50c, 5-42 | EF39       | 50c       | 50c       |
| 1S5   | \$1.80    | 5ASTGT | \$1.00    | 6SF3          | 75c       | 16A5    | \$1.70    | EF98       | \$1.85    | 50c       |
| 1S7   | \$1.80    | 5AT7   | \$1.45    | 6SH7          | 75c       | 16A8    | \$2.10    | EY91       | 50c       | 50c       |
| 1U4   | \$1.80    | 5AUBA  | \$2.40    | 6SH7          | 50c, 3-42 | 25L6T   | \$1.00    | K795       | \$3.00    | 50c       |
| 1U5   | \$1.60    | 5AV6   | \$1.40    | 6S7           | 75c, 3-42 | 25Z6T   | \$1.00    | QEQ3/12    | \$4.75    | 50c       |
| 2A5   | 75c       | 5B5    | 75c       | 6S7GT         | \$2.00    | 31L6T   | \$1.00    | QV204/7    | \$2.50    | 50c       |
| 2A5   | 75c       | 5B5    | 75c       | 6S7GT         | \$2.00    | 31L6T   | \$1.00    | RL18       | 75c, 3-42 | 50c       |
| 2C26  | 50c, 5-42 | 5B6E   | \$1.25    | 6SL7GT        | \$1.25    | 19      | 50c       | UL41       | \$1.00    | 50c       |
| 2D21  | \$1.20    | 5B6E   | \$1.25    | 6SN7GT        | \$1.00    | 30      | 50c       | UR53       | 50c       | 50c       |
| 2E26  | \$2.50    | 5B6M   | \$1.85    | 6SN7GT        | \$2.00    | 41      | 50c       | VCR97      | 5.00      | 50c       |
| 2X2   | 50c       | 5BQ5   | \$1.75    | 6S8           | 75c       | 57      | 50c       | VR33       | 50c       | 50c       |
| 3A4   | \$2.20    | 5BR5   | \$1.45    | 6S8           | \$1.85    | 58      | 50c       | VR33       | 50c       | 50c       |
| 3A5   | \$1.00    | 5BX3   | \$1.45    | 6S8           | 50c, 5-42 | 80      | \$1.70    | VR102      | 50c       | 50c       |
| 3Q5   | \$1.00    | 5BY7   | \$1.45    | 6U5           | \$1.70    | 84      | 50c, 5-42 | VR135      | 50c       | 50c       |
| 3S4   | \$1.00    | 5CZ6   | \$1.60    | 6V4           | \$1.14    | 100TH   | 30c       | VR135      | 50c       | 50c       |
| 3V4   | \$1.50    | 5C8    | \$1.00    | 6V4           | \$1.14    | 100TH   | 30c       | VR135      | 50c       | 50c       |
| 5AR4  | \$2.50    | 5CG7   | \$1.55    | 6V6GT         | \$1.75    | 717A    | 75c       | VR137      | 50c       | 50c       |
| 5AS4  | \$1.45    | 5CH6   | \$2.35    | 6X4           | \$1.00    | 897     | \$3.75    | VR150      | \$1.25    | 50c       |
| 5BP1  | 5.00      | 5CM5   | \$2.35    | 6X5           | \$1.45    | 898     | \$1.00    | V778 (ED5) | 50c       | 50c       |
|       |           |        |           | 7A8           | 35c, 8-42 | 899     | \$2.00    | VT127      | 50c, 5-42 | 50c       |
|       |           |        |           | 7C5           | 80c, 5-42 | 899B    | \$1.50    | VT501      | 75c       | 50c       |
|       |           |        |           | 7C7           | 50c       | 832A    | \$6.00    | VU39A      | 50c       | 50c       |
|       |           |        |           | 7E6           | 35c, 8-42 | 837     | \$2.00    |            |           | 50c       |

## PP/439/APG-30 POWER SUPPLY

Radar type, new. Contains 35 valves—8 6AQ5, 5 6X4, 4 12AX7, 2 6A5, 3 6AL5, 2 12AT7, 2 6D6, 4 6AS6, 4 2C51, 2 6J5, 2 6A6, 2 6AH6. Also twin 250v. blower motor, relays, variable conds., transformers, etc. 28v. 500 cycle. Ideal for wrecking. Sorry, no further information. Brand New. \$35.

## STEEL TRANSFORMER BOXES

6 1/2 x 9 x 5 inch with matching lid, air vents each end. Ideal for battery charger, etc. Unpainted, new. \$1. Discount for quantity.

## DURAL TUBING

1/4 inch Tubing, 6 ft. lengths 36 ft. for \$2 or 40c per 6 ft. length.

## POTENTIOMETERS

Wire Wound, 4 Watts, 1 1/4 inch diameter. Sizes available: 5, 10, 25, 50, 250, 500, and 50K ohms, 4/- each.

## NEW CHANNEL LOCK PLIERS

Type 337W ..... 20/- each  
Type 356 End Cutters ..... 20/- each

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Sealed Type  
24 volt, 670 ohms, D.p.d.t., size 2 x 1 1/2 inch, Price 15/- (\$1.50).  
24 volt, 700 ohms, D.p.d.t., size 1 1/2 x 1 inch, Price 15/- (\$1.50).

## MODULATION AND DRIVER TRANSFORMERS

Modulation Transformer, 15 watts, pair of 6AQ5 to 2E26 valve.  
Also Driver Transformer, single ended primary to push-pull grids of 6AQ5.  
£2 the lot, or Mod. Trans. 30/-, and Driver Trans. 10/-.

## BRACKET BEZEL LAMPS

1/2 inch diam. Bezel in Red, Amber, Green. Suit screw type globe. 35c, 4 for \$1.20.

## CONDENSERS

50 uF. 200v., pigtail ..... 20c ea., \$2 dozen  
50 uF. 12v., pigtail ..... 20c ea., \$2 dozen  
12 uF. 50v., pigtail ..... 20c ea., \$2 dozen  
1 uF. 100v., pigtail ..... 10c ea., \$1 dozen  
10 uF. 25v., pigtail ..... 10c ea., \$1 dozen

## CABLES

2-core, shielded, new, 20c yard.  
12-core, shielded, new, 40c yard.  
3-core, plastic covered, new, 20c yard.  
4-core, plastic covered, new, 5c yard.  
6-core, plastic covered, new, 30c yard.

## SPECIAL BARGAINS

Block Condensers, 2 nF, 2500 v.v. .... \$2.50  
(Pack and Post 3c.)  
DC Crystal Holders, new, less crystal, 75c.  
Carpenter Relay and Socket, Type 3E1, 1800T 250 ohms, 900T 250 ohms, \$1.50.  
P.M.G. Strip Boards, containing 24 Jacks, \$3.  
P.M.G. Strip Boards, containing 48 Jacks, \$5.  
Headphone Cords, new, 45c pair.  
3-pin Plug with two yards Cord, 45c.  
Bags of Mixed Resistors (50), \$1.25 bag.  
P.M. Fuse Holders, 45c each.  
50 ohm Coaxial Cable, 3/16 inch diam., new, 25c yard.  
12 ohm Co-ax Cable, 35 ft. lengths, 3/16 inch diameter, \$1.  
12 ohm Co-ax Cable, 27 yard lengths, 3/16 inch diameter, \$2.  
122 Aerial Packs, \$6 each.  
12-core Cable with Plug, 22 yards long, \$5.  
Dural Tubing, 12 ft. lengths, 1/4 inch diameter, three for \$2.  
P.M.G. Key Switches, 75c each.

## GLIDE PATH RECEIVERS

Type 733D, complete with valves and Crystals ..... \$10.00  
(Pack and Post \$1.00.)

## TRANSCIVER

TR1967, English (later version of SCR322), 15 watts, 21 Valves, Freq. coverage: 115 to 145 Mc. Crystal loaded receiver. Transmitter uses TT15 output valves. Three stage exciter using 4.06 Mc crystal osc. 6AM5, doubler 6AM5, driver amp. QV04/7, p.a. amp. TT15. In-built modulator, complete with 25 volt generator. Condition as new. To clear £15 (\$30). Circuit for above unit, 10/- each.

## NEW VALVE SOCKETS

|  |           |
|--|-----------|
| 4/250A Sockets   | 30/- each |
| ACorn  | 2/6       |
| EF50   | 2/6       |
| VCR97  | 15/-      |
| 505  | 12/-      |
| EA50   | 2/6       |
| 5-pin  | 2/6       |
| 5-pin  | 2/6       |
| 7-pin P.T.F.E. Sockets                                       | 5/-       |
| Loctal P.T.F.E. Sockets                                      | 5/-       |
| Special completely shielded 7-pin P.T.F.E. socket and shield | 10/- pair |

## NEW CHOKES

7-5H. 125 mA. 30 oh. 14 H. 60 mA. 12/5 ea.  
10 H. 4 mA. 12/5 ea.

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Harry 3ZK became our new President and controller of our Wednesday night hook-ups which will be held in future on 3510 kc—I said K. fellas, my new slogan is nerzt to Hertz! Vice-President and Junior Vice-President were elected, Herb 3NN and Gavin 3ABJ respectively. Our W.I.C.E.N. Co-Ordinator is Roy 3ZYG, who will designate h.f. aided responsibilities to Bob 3ARM when necessary.

Following the general meeting a display of home-built equipment was held which was won by Harry 3ZK with his all-band auto-tuner s.a.b. tx—handicap of three 807s (un-cracked) next time mate!

Next on the agenda was the 80 mc hidden tx hunt which was tracked down in pretty slick time by Roy 3ZYG—following 5 meter readings only and no d.f. loop—grt! and me waiting all that brass on my loop. 3AFU and 3IB/3ZK were only a few minutes behind the winner. The next excursion was a guided inspection of the microwave station which attracted a capacity roll-up and we were very much indebted to the Supervising Technician, Mr. David Kentish, for a most informative description of all phases even if most of us did get lost in the wave guides, channels and gyroscopes!

The day wound up with a magnificent spread at the Bordertown R.S.L. Hall for which we are grateful to 3ZAI's XYL Jill, and very able assistant Raylene not to mention the other kind ladies who contributed so much hard work. I must also mention the President of the Tatiara District Council, Cr. McMillan, who kindly addressed our meeting and took a keen interest in our activities.

The following week-end many Zone Amateurs were actively engaged in the annual Jamboree-on-the-Air. 3ZK, 3AEJ, 3ATR and 3IB are known to have participated. At 3IB, the station was set up in the local Guide Hall which is very well situated not far from the main town shopping centre. The station was active most of Saturday and Sunday, and a large number of Scouts, Guides, Brownies and Cubs thoroughly enjoyed the occasion. The only disappointment was the clash with the "CQ" contest which largely precluded satisfactory overseas contacts. Nevertheless many

fine inter and intrastate Jamboree contacts were made. This is the first time a Jamboree station has operated from Dimboola and the event attracted a large number of interested members of the public as well as some welcome publicity and photographs in the local press.

3AEJ is currently working on a phasing rig and hopes to join the sidebanders before long. S.W.I. Neil at Dimboola has revamped a t.v. tuner as a 2 mc converter ahead of his Lafayette rx and is currently constructing a beam, so hopes to be able to copy some of the v.h.f. boys soon. Neil hopes to sit for his ticket in the near future. 3IB still snooping the DX bands and recently hooked 8F4 and V55 to bring the DX countries score to 149. 28 Mc. observed to be opening to W and JA DX the past few week-ends. Chas 3IB acknowledges a backlog of several hundred QSLs for VR1B activity, but hopes to tidy these up by early in the New Year, a movement of QTH earlier in the year interrupted these activities. 73. Chas 3IB.

## SOUTH AUSTRALIA

The monthly general meeting of the VKS Division for October was held in the club rooms to a good roll-up of members, and took the form of a buy-and-sell. Very little official business took place, in fact when one looks back on the evening, very little took place at all, and after the distribution of QSL cards was disposed of, and a short smoke-up took place, the meeting was handed over to the gentlemen in charge of the buy-and-sell—none other than Brian 5CA and Phil 3NV. For the first time in the long history of such nights, very little was offered for disposal and despite the valiant attempts of several members of the audience to keep the night on its feet, it finally expired with a gasp at the unheard hour of 9.40 p.m. A number of members stayed behind to natter and exchange ideas, but the vast majority having absorbed the lethargic conditions existing at the meeting, justifiably left for home, giving their families the shock of their lives, causing

several XYLS to wonder as to whether they should call the doctor or wait until the morning.

Opportunity was taken at the meeting to welcome back Bob 8FU, ex Georgia Tech., who has returned to VKS after his sojourn in W. land. He looked fit and well, and settled in at the meeting in such a manner that it did not seem that he had been away at all. I meant to ask him as to his proposed QTH, the rumours have had him in residence in the area of Geoff 5TV, but I believe it will be Kensington. Right Bob?

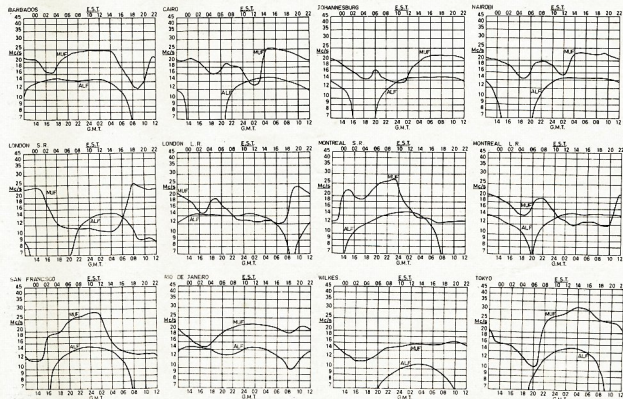
Sat next to Brother John 5VG, better known on the air as Griff, at the meeting and was cut to the quick when he told me that he has been nominated for the W. S.a.b. Club, despite the fact that he is still an a.m. man. I gave him the Gypsy's warning as to what would happen to those who desert the cause for "The Thing," but I don't think he was very impressed. Anyway, I will keep an ear on him. Little does he know that I listen into his Sunday morning sked with Ross 6DA on 14 Mc—now wait a minute, is it Sunday morning, afternoon, or night? Oh dear, oh dear, I might miss something.

Wien was represented in the recent E.F.S. Bushfire Clean-up Week Procession the other Saturday. The vehicles were those of Treva 5Z15 and Geoff 5TV, being accompanied by John 5KX, Brian 5CA, Howard 5ZBE and the old reliable George Edmeades. Both vehicles were suitably decorated with signs drawing attention to Wien, as well as with anti-bushfire slogans, to say nothing of an abundance of acorns, in fact they were later described as resembling a couple of enraged porcupines.

Regarding the above paragraph, was more than pleased to hear Geoff 5TV when describing the procession to the meeting, give George Edmeades a pat on the back for his untiring enthusiasm in the cause of Wien. George is one of those retiring, self-effacing hard workers who can always be relied upon at all times for that little bit extra when needed. You'll do us George—keep up the good work.

John 5KX, complete with number one son, noticed at the meeting and from all accounts the said son is showing signs of being keen

## PREDICTION CHART FOR DECEMBER 1966



(Prediction Charts by courtesy of Ionospheric Prediction Service)







I think that in all fairness the VK3 Division should be warned that an invasion seems most likely to occur about the latter end of this month. Those involved are 6AQ, 6RT, 5VG, 5YB, 4EP, and they plan to descend on the unsuspecting city like a pack of—err, Hams, for a couple of weeks, too, mark you! Will someone please advise VK3 cause I can't be sure that they will read these notes. Thanks.

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**AUSTRALIAN ELECTRONICS**  
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Another of my DX type spies reports that John G3ELXV, ex VK6JJ, is treasuring fond memories of his recent five-year stay in this fair city and passes 73 to his many friends. May I take this opportunity, on behalf of the VK6 Division to wish you, one and all, a Very Merry Xmas and a Happy New Year. 73. Ross 6DA.

## TASMANIA

Following the recent elevation of Terry TCT to the rank of life membership, a little further investigation took place into the records and it was discovered we had on our books an eclipse of that Terry. This member's details went something like this: A Councillor for 15 years, commencing back in 1937. QSL Manager for 10 years, 1947-1957. President for 10 years, 1957-1967. Traffic Manager 1 year, 'B'ast Officer for 4 years, President for 7 years, member of the Distribution Committee for 2 years, and a member of the Executive Committee for 1 year. He said gent (and who could call him anything else) appears to have had some job or other since 1967, excluding the war years, which was a pity. He was a member of the 1967 Ian TZZ to propose Tom T4L for life membership, and I feel sure there would not be one member who could not say, "Congratulations to you, Terry." However, don't let it off to your head, we aren't going to pension you off yet, you're good for a few more years in some way or another. Correspondent for some instance - or Secretary even!

This year's Jamboree was without a doubt our best ever effort, a total of 45 Scout Groups were catered for, and I feel this is indeed a credit to all who took part. Do you realise this is three times the Australian average based on population. Congrats, to VK7, we may be the smallest Division in numbers, but we certainly aren't in participation, a most commendable effort indeed, of which we can feel justifiably proud.

At the time of writing the Hamfest is four weeks away, but by the time you read this, if you do, it will be over by about a week, but if preparations are any indication, it will be a beaut this year. All I can say at the moment is, "I hope I saw you there, and you'll come again next year."

The Hamfest might be over, but the v.h.f. season is just starting, and it gets away this year with the "Ross Hull" Contest, commencing on Dec. 7. Remember, it's your best seven days that count, and as I've said before, they don't count a bumper if you don't get your log away.

We should have a "Kiwi" visitor in the State over the holiday period. My spies tell me that ZLNNH will be touring the State. I don't know of any other visitors at this stage, but I've no doubt there will be quite a number coming to see the best place in the Commonwealth. To those who are coming, may I remind you to bring your Call Book. It has got the addresses of most licensees in it, and make yourself known wherever you go. I'm sure you will be shown the renowned "Tassie hospitality."

Speaking of holidays, I'm going to have one myself this Christmas for a change, normally it's a mid-winter job for me, but it has all been planned what's got to be done—might get a better rest if they were in winter time again, still, one can but try.

As this will be the last you'll read of my piffle for the year 1966, may I take this opportunity of wishing my readers, on behalf of the President, Council and members of the VK7 Division, a Very Merry Xmas, a Bright and Prosperous 1967, and in fact all the things you wish yourselves. 73, Geoff 7ZAS.

## HAMADS

Minimum 50c, for thirty words.  
Extra words, 2c each.

Advertisements under this heading will be accepted only from Amateurs and S.W.'s. The Publishers reserve the right to reject any advertising which, in their opinion, is of a commercial nature. Copy must be received at P.O. Box 38, East Melbourne, C.2, Vic., by 5th of the month and remittance must accompany the advertisement.

**DUE** to withdrawal of loaned gear, Cessnock Youth Radio Club would like to beg, borrow, or buy very reasonably a Communications Rx. Particulars to Hon. Sec., 78 Aberdare Rd., Cessnock, N.S.W.

**ESTATE** the late VK2ADC, Gordon McLeod was constructing a copy of the Collins KWM-2 Transceiver, including an exact duplicate of the Collins PTO with its dial mechanism, etc. All components, all brand new, including switches, relays, Collins mechanical filter, etc., are there, now sorted out, chassis construction remains to be done. Any person interested to complete the project, contact VK2AVA. The lot is available for \$250. Arrie Bles, VK2AVA, P.O. Box 23, Springwood, N.S.W.

**FORD Falcon De Luxe Sedan 1961/2**, beautiful condition, been under wraps all this year, surplus to requirements. Will exchange for Collins 32S-2 or 3, p.s.u. and handbook in mint condition, or sell \$750. VK3TD, Phone 787-1407 (Melb.).

**FOR SALE** Going s.a.b., must sell. Halli-  
crafters HT40 TX. 75 watts a.m./c.w., 80 to 6  
metres, \$100. 240/100v. a.c. 300 watts step-  
down transformer, \$19. Heathkit VF19 v.f.o.,  
\$29.95. Heathkit HW-100 100 Mc. power  
supply, 120 watts at 600v. 250 mA. or 600v. 120  
mA. and 300v. 100 mA., plus 130v. 30 mA.,  
8.5v. 11 amp. or 12v. 5 amp. \$20. Heathkit  
HW-100 100 Mc. power supply, 120 watts at  
LSG11 Signal Generator, 125 Kc. to 300 Mc.,  
\$20. All equipment in good condition. Complete  
with circuits and Handbooks. Will sell  
complete, or parts, at best price. K5ABQ, J.  
Moran, 444 Mon. Ave. SE, Canterbury, E.  
Tex. Phone 81-6321, Ext. 52.

**FOR SALE:** New National 1 watt Citizen Band 11 transistor Transceiver, Model RJ-15A, with external Zephyr mic., write for more information, \$80. Also one set Tokai C.B. Band 9 transistor Transceivers with separate built-in speaker and mic. for telephone-like operation, \$65. J. Sykes, 90 Melbourne Rd., Sorrento, Vic. Tel. 42874 after 5 p.m.

**FOR SALE:** One 240 volt 400 watt portable Alternator including Villiers 4-stroke motor as new. Suitable Field Day purposes, \$145. T. Rodda, VK3ATR, 140 Scott St., Warracknabeal, Vic.

**FOR SALE:** 120 watt a.m. home-built Transmitter, band switched 50-40-30, v.f.o. and parallel 6140s, 600v. power supply, class B 2sc21 bias 807s, modulator, good condition. Home-built 5-band switched Receiver, 455 Kc. xtal filter, requires little work. BC457A, BC453B (Qser), both with tubes. 455 Kc. Collins mechanical filter and 3 crystals (never used) for s.b. exciter. 1906 A.R.R.L. Handbook. Quantity tubes, parts, etc. Offers for any or all. W. Yates (VK2AWY), Box 434 Post Office, Orange, N.S.W.

**FANDA CUB**, all band table top commercial tx, 60w. c.w./40w. a.m., self contained with in-built v.f.o. and power supply, \$30 or consider exchange for Lafayette HA230 Receiver. VK5WD, Box 1962P, G.P.O., Adelaide, S.A.

**SELL:** Hy-Gain Model 2TQ matched trap kit for building 40 and 80 metre Doublet comprising 2 large end insulators, 2 40 mx traps plus centre insulator and instruction manual. An ideal 40 and 80 mx antenna for confined space. Cost \$25 to land. Sell at \$18. Roth Jones, 1 Albert Rd., Melbourne, S.C.2, Vic. Tel. 25-6911.

**SELL:** Six Receivers specially modified for S.w.l's. CR100 with manual, £35. R. & H. Hambroder (9 valves and 3 diodes), £25. Hambroder 4 bands, 12 valves and 4 diodes

135. Hambander, 4 bands, 13 valves and 4 diodes, £15.  
136. Hambander, 6 bands, 15 valves and 3 diodes, £45.  
137. General, 4 bands, 17 Kc. to 1 Mc. and 1 diode, £22.  
138. General, 10 bands, 15 valves and 3 diodes, £25.  
139. Mc. Super-range, with r.f. stage, £10.  
140. Tasma 70 Mc. f.m. Carphone and vibrator power supply, 26 valves (no crystals), £15.  
141. Six band Mod. Osc., 85 Kc. to 75 Mc., £10.  
142. Aires 35v. Camera with three lenses, normal, tele, wide angle.  
143. Astronomical Telescope 50 x 50 for sale or exchange for good Tape Recorder or other equipment.  
H. Roach, 28 Foster Ave., Glenhuntingly, Vic. 53-3757.

**SELL:** T.V. Chassis, new tuner, sync. and sound good, no pix tube, \$30. Geloso V.f.o., \$15. Woden UM2 Mod. Trans., \$15. Also converters, etc. Offers or trade for antenna tower. VK3WW, 465-2991 (Melb.).

**SELL:** 12 volt 300 watt Genemotor powered by a 1 h.p. 4-stroke engine, \$60. Pye Echo Sounder, 12 volt, \$50. Phone 87-1930 (Melb.)

**SWAP:** As new No. 19 Mk. II. with manual, for ARB. Cash adjustment if necessary. P. Ward, WIA-L3284, School Residence, Litchfield, Vic.

**WANTED:** Woden UM3 Modulation Transformer. E. R. Gray, VK3ZSB, 95 Atherton Road, Oakleigh, Vic. Phone 32-4529 (working hours), 56-3261 (after hours).

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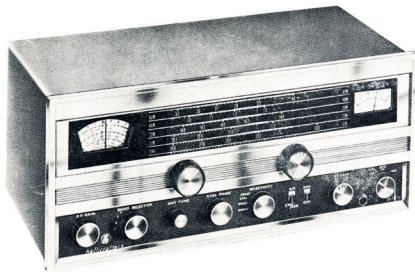
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